

REMARKS

This is intended as a full and complete response to the Final Office Action dated December 28, 2004, having a shortened statutory period for response set to expire on March 28, 2005. Please reconsider the claims pending in the application for reasons discussed below.

Claims 1-35 remain pending in the application and are shown above. Claims 1-3, 5, 8-11, 13, 16-22 and 27-35 are rejected and claims, 6-7, 12, 14-15, and 23-26 are indicated to be allowable by the Examiner. Reconsideration of the rejected claims is requested for reasons presented below.

Claim Rejections – 35 USC § 103

Claims 1-3, 5, 8-11, 13, 16-22, and 27-35 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Solomon* (5,030,828) in view of *Thomas, et al.* (4,369,458).

The present invention, as clearly defined in the independent claims, involves forming cavities that have a detector on the bottom surface and *reflective walls* which reflect radiation onto the detectors. The references cited by the Examiner all teach *cavity walls with detectors*. The references have absolutely no suggestion of the claimed subject matter from element b) of claim 1, element a) and b) from claim 9 and the corresponding limitation in claim 17. In fact, as best understood by the Applicant, the devices taught in the references teach away from the present invention because they would not work if they had reflective walls.

More specifically, regarding claims 1, 9 and 17 the Examiner has stated that *Solomon* teaches "forming an array of cavities 13, 36 in the layer of material such that each detector is positioned at the base of the cavity (fig. 1)." The Examiner has failed to discuss the entire limitation of claim 1, of the present invention in the final office action. *Solomon* teaches "each of the cavities 13 of the first embodiment has a vertical wall 15 and a pyramidal floor 16. The wall 15 and floor 16 of each cavity 14 has a body of detector material formed as a layer thereon." (Col. 4, ln. 41-45). Thus, *Solomon* discloses the entire cavity being layered by the detector. By contrast, in the present invention, the cavities have reflective walls for reflecting radiation onto detectors at their

bases. In other words, the cavity walls are coated with a different material from that used for the detectors, the Examiner has overlooked this point. Further, the Examiner states that the detector is element 28 as shown in figure 2-4, however, *Solomon* defines element 28 as a "first electrical contact 28 provides an electrical interface between the substrate 10 for a particular cavity 13 and external circuitry." (Col. 4, ln. 60-62). This is clearly distinguished from the "body of detector material formed as a layer" on the wall and floor of each cavity. (Col. 4, ln. 41-45). Thus, *Solomon* does not teach, show, or suggest forming an array of cavities in the layer of material such that each detector is positioned at the base only of a cavity, the cavities having reflective walls for reflecting radiation onto the detectors as disclosed in claim 1, and claims 2-8 which depend therefrom. Nor does *Solomon* teach, show, or suggest forming in a layer of material an array of cavities having walls which reflect the radiation towards the bases of the cavities; providing, on one face of the material, an array of detector elements, each including a material which absorbs the radiation, such that one element is positioned at the base only of each cavity as disclosed in claim 9, and claims 10-16 which depend therefrom. Further, *Solomon* does not teach, show, or suggest a radiation detector array comprising an array of radiation collector cavities formed in a layer of material, the cavities having walls which reflect the radiation; and an array of detector elements on one face of the layer of material arranged with an element at the base only of each cavity, the elements including a material which absorbs the radiation as disclosed in claim 17 and claims 18-34 which depend therefrom. These limitations are not cured by *Thomas, et al.* Therefore, for the reasons stated above, Applicant respectfully request allowance of claim 1, 9 and 17 and dependent claims 2-8, 10-16 and 18-35 which depend therefrom.

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Allowable Subject Matter

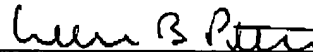
Claims 4, 6-7, 12, 14-15, and 23-26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. As discussed above

Applicant submits that claims 1, 9 and 17 and in condition for allowance and therefore claims 4, 6-7, 12, 14-15, and 23-26 which depend therefrom are also in condition for allowance.

Conclusion

Having addressed all issues set out in the Final Office Action, Applicant respectfully submits that the claims are in condition for allowance and respectfully request that the claims be allowed. In conclusion, the references cited by the Examiner, alone or in combination, do not teach, show, or suggest the invention as claimed.

Respectfully submitted,



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